The VRLab: Where Space Training & Operations Meet Virtual Reality

ABSTRACT

Ms. Evelyn Miralles' lecture will describe aspects of the development and operations of the Virtual Reality Laboratory (VRLab) utilized for Astronaut space training. She will talk about the tasks performed at the VRLab such as Extra Vehicular Activities (EVA) or Spacewalks, Simplified Aid for EVA Rescue (SAFER) runs, Mass Handling scenarios and Robotics operations. She will also discuss the past, present and future of the virtual reality technology use for space exploration and other industries.

BIO

Ms. Evelyn Miralles serves as a Principal Engineer and Lead VR Innovator for the Virtual Reality Laboratory (VRLab), an astronaut training facility at NASA Johnson Space Center. The VRLab is a unique facility used extensively during the Space Shuttle and International Space Station (ISS) programs. She is part of the ISS support team for Extra Vehicular Activities (EVA) and Robotics operations. Before joining the VRLab, she worked as a Lead Graphic Simulator and Software Developer for the Integrated Graphics Operations & Analysis Laboratory (IGOAL) in the JSC Engineering Directorate.

Ms. Miralles has a bachelor degree in Computer Engineering and a bachelor in Computer Graphics. She also has an MBA in Management of Technologies from the University of Houston. She has worked at NASA for over 20 years, contributing directly to the development of the state-of-the-art Dynamic Onboard Ubiquitous Graphics software package (DOUG) used for astronaut training, on the ground and on orbit. DOUG has been distributed to all NASA centers and other institutions around the world supporting our International Space Partners.

Ms. Miralles is the recipient of the 2009 NASA Exceptional Award for Innovation for the Engineering DOUG Graphics for Exploration software (EDGE) delivered to research facilities, including many US universities and commercial partners. In 2012, she was presented with the prestigious NASA Flight Safety Award, given exclusively by the astronaut office, as well as the Outstanding Employee Performance Award from her direct employer L-3 Communications, a prime contractor in aerospace and defense systems. Recently, Ms. Miralles was nominated for the Distinguished Alumni Award from the University of Houston at Clear Lake for her contributions to the community, space study and exploration. She also serves as the active EVA Chair member for the AIAA Houston Chapter.

Refreshments will be served at 3:45 p.m.